



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,741	05/06/2005	Helmut Weyl	10191/3875	1500
26646	7590	10/02/2006	EXAMINER	
KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004			LARKIN, DANIEL SEAN	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/512,741	WEYL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Daniel S. Larkin	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>27 October 2004</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Reference numeral --161 -- does not appear within the drawing figures as suggested by the disclosure on page 4, lines 16 and 22.

Reference numeral --162 -- does not appear within the drawing figures as suggested by the disclosure on page 4, lines 17, 27, and 35.

Reference numeral -- 111 -- does not appear within the drawing figures as suggested by the disclosure on page 5, line 6.

Reference numeral -- 39 -- does not appear within the drawing figures as suggested by the disclosure on page 6, line 16.

3. The drawings are objected to because of the following:

The lead line for reference numeral "30", as shown in Figure 1, appears to be pointing to the housing rather than the connection of the housing (11) to the housing shell (29).

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

5. The disclosure is objected to because of the following informalities:

Page 6, line 14: The term "swells" should be corrected to read -- swelling --.

Page 6, line 16: Reference numeral "39" should be corrected to read -- 34 --.

Appropriate correction is required.

***Claim Objections***

6. Claims 13-26 are objected to because of the following informalities:

Re claim 13, claim line 2: The article -- an -- should be inserted prior to the term "exhaust".

Re claim 13, claim line 10: The second occurrence of the article "a" should be corrected to read -- the -- or -- said --.

Re claim 17, claim line 1: The "comma" after the term "wherein" should be deleted.

Re claim 21, claim line 4: The phrase "the connecting cables" lacks antecedent basis. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 13-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 13, claim line 8: It is not clear what the end section is "contacting". It would appear that some additional word or phrase is needed after the term "contacting".

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 13-15, 17, 18, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,246,562 (Weyl et al.) in view of EP 1037039 (Kipka).

With respect to the limitations of claims 13-15, Weyl et al. disclose a gas measurement sensor, comprising: a housing (12); a measuring element (27) accommodated in the housing, the measuring element having an end section (27/3) used for contacting that protrudes from the housing; a connector plug (43) mounted on the end section; and a housing shell (67) which covers the end section and the connector plug with a radial clearance, the housing shell having a first shell end (67/2)

Art Unit: 2856

that is attached to the housing (12), and a second shell end (67/1) that is sealed, wherein a free space is present inside the housing shell. Weyl et al. fail to disclose that the free space present inside the housing is completely filled with a bulk material (claims 13, 14) that is non-conductive, inorganic, and granulated (claim 15).

Kipka discloses a gas sensor having a housing/protective sleeve (5); a measuring element (1) accommodated within the housing/sleeve (5); a connector plug (3); and free space within the interior of the housing/sleeve (5). Figure 2 shows that the free space of the sensor is filled with a ceramic material which appears to be granulated. Ceramics, by their nature, also generally tend to be insulative and inorganic. Modifying the free space of Weyl et al. to include a granulated, non-conductive, and inorganic material would have been obvious to one of ordinary skill in the art as a means of providing both a sealing feature as well as minimizing movement of the internal elements of the sensor which would in turn minimize shock and breakage of the interior connections.

With respect to the limitations of claim 17, Weyl et al. disclose that a molded body (65) is introduced into the housing shell (67) to seal the second end (67/1) of the housing shell facing away from the housing, connecting cables (57) connected to the connector plug (43) being passed through the molded body (65).

With respect to the limitation of claim 18, Weyl et al. disclose that the housing shell (67) and the molded body (65) are radially pressed together.

With respect to the limitation of claims 25 and 26, Weyl et al. disclose that the housing shell (67) is welded to the housing (11), col. 5, lines 31-34.

***Allowable Subject Matter***

12. The following is a statement of reasons for the indication of allowable subject matter:

Prior art was not relied upon to reject claims 16 and 19-24 because the prior art fails to teach and/or make obvious the following:

Claim 16: Utilizing quartz sand or granulated corundum to fill the space within a housing shell of an exhaust gas sensor in combination with all of the remaining limitations of the base claim and all intervening claims.

Claims 19-24: Utilizing a temperature resistant, porous foam to fill the space within a housing shell of an exhaust gas sensor in combination with all of the remaining limitations of the base claim.

13. Claims 16 and 19-24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art to US 4,236,138 (Segawa et al.) discloses a gas component detector whereby the free space between two pipes (5, 8) is filled with an electrically insulative powder (7), such as alumina, magnesia, or the like.



The prior art to US 4,597,850 (Takahasi et al.) discloses an oxygen sensor comprising an airtight sealing member (9) comprised of aluminum oxide powder, talc powder, or an inorganic adhesive agent.

The prior art to US 4,453,397 (Ohta et al.) discloses a gas detecting sensor whereby the free space above a gas sensor (1) is filled with an inorganic adhesive (12).

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Larkin whose telephone number is 571-272-2198. The examiner can normally be reached on 8:00 AM - 5:00 PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/512,741

Page 9

Art Unit: 2856

Daniel Larkin  
AU 2856  
26 September 2006



**DANIEL S. LARKIN**  
**PRIMARY EXAMINER**